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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/521,639	03/08/2000	Lewis B Aronson	9775-0031-999	1452

22913 7590 03/10/2004

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EXAMINER

JACKSON, CORNELIUS H

ART UNIT PAPER NUMBER

2828

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/521,639

Applicant(s)

ARONSON ET AL.

Examiner

Cornelius H. Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.


- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 29-55 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 29-55 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


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Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Acknowledgement

1. Acknowledgment is made that applicant's Amendment, filed on 12 November 2003, has been entered. Upon entrance of the Amendment, claims 1-28 were canceled and claims 29-45 were newly added. Claims 29-45 are now pending in the current application.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 29-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 29 recites the limitation "the optical fiber" in line 15 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 29-31, 33, 35 and 36 are rejected under 35 U.S.C. 102(e) as being anticipated by Nagano (6014359). Nagano disclose a laser apparatus **Fig. 1**, comprising: a laser **101** that emits light that is substantially linearly polarized when in use; a quarter wave retarder plate **103** that is positioned with respect to the laser **101** so that: light emitted by the laser **101** is circularly polarized by the wave retarder plate **103** so as to have a predetermined handedness before reaching an optical transmission system, and light reflected back toward the laser **101** has a linear polarization, after passing through the quarter wave retarder plate **103** a second time, that is orthogonal to the linearly polarized light emitted by the laser **101**; and a linear polarizer **102** that is positioned between the laser **101** and the quarter wave retarder plate **103** so as to: permit the linearly polarized light emitted by the laser **101** to pass through the linear polarizer **102**; and block light reflected back toward the laser **101** by the optical fiber that

has a linear polarization that is orthogonal to the linearly polarized light emitted by the laser **101**, **see col. 1, lines 24-49**.

Regarding claim 30, Nagano discloses the linear polarizer is disposed adjacent to a surface of the quarter wave retarder plate facing the laser, **see Fig. 1**.

Regarding claim 31, Nagano disclose a lens **104** that is positioned so that the quarter wave retarder plate **103** is disposed between the lens **104** and the laser **101**, **see Fig. 1**.

Regarding claim 33, Nagano disclose a hermetically sealed housing within which the laser is disposed, the housing having a window through which the light emitted by the laser is transmitted, **see Fig. 1**.

Regarding claims 35 and 36, Nagano discloses the quarter wave retarder plate as the window, **see Fig. 1**.

7. Claims 38 and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Tabata et al. (5434669). Regarding claim 38, Tabata et al. disclose a laser apparatus **Fig. 13** comprising: a laser **51** that emits light that is substantially linearly polarized when in use, the laser **51** having an oscillation mode; a quarter wave retarder plate **52** that is positioned with respect to the laser **51** so that: light emitted by the laser is circularly polarized by the wave retarder plate so as to have a predetermined handedness before reaching an optical transmission system **18, 20, 22, O, IG, etc**; and light reflected back toward the laser has a linear polarization, after passing through the quarter wave retarder plate **52** a second time, that is orthogonal to the linearly polarized light emitted by the laser **51**; wherein the laser apparatus does not include any

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polarizing element positioned between the laser **51** and the quarter wave retarder plate **52**, see col. 11, line 66-col. 12, line 33.

Regarding claim 46, Tabata et al. disclose a laser apparatus and transmission system **Fig. 13** comprising: a laser **51** that emits light that is substantially linearly polarized when in use, the laser **51** having an oscillation mode; an optical fiber **18** positioned relative to the laser so that at least a majority of the light emitted by the laser **51** is transmitted away from the laser **51**; and a quarter wave retarder plate **52** that is positioned with respect to the laser **51** so that: light emitted by the laser is circularly polarized by the wave retarder plate so as to have a predetermined handedness before reaching the optical fiber **18**; and light reflected back toward the laser by the optical fiber has a linear polarization, after passing through the quarter wave retarder plate **52** a second time, that is orthogonal to the linearly polarized light emitted by the laser **51**, see col. 11, line 66-col. 12, line 33.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 32, 34 and 37, are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagano (6014359) in view of Applicant's admitted prior art.

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Regarding claim 32, Nagano discloses the claimed invention except for position of the lens being disposed between the quarter wave retarder plate and the laser. It would have been obvious to one of ordinary skill in the art at the time the invention was made to place the lens closer to the laser and thereby placing the lens on the other side of the quarter wave retarder plate in order to decreased the distance the laser beam travels, since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.

Regarding claims 34 and 37, Nagano fails to teach a thin film antireflective coating on at least one surface of the window. Applicant's admitted prior art teaches a thin film antireflective coating on at least one surface of the window. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ a thin film antireflective coating on the window in order to reduce reflections from the window, **see specification, page 1, lines 12-15.**

10. Claims 38-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagano (6014359) and Applicant's admitted prior art as applied to claims 1-37 above, and further in view of Fukushima et al. (4955006). Nagano and Applicant's admitted prior art teach all the stated limitations, except for the absence of a linear polarizer or the presence of an optical fiber.

Regarding claim 38, Nagano discloses the claimed invention except for the lack of a linear polarizer. It would have been obvious to one of ordinary skill in the art at the time the invention was made to remove the linear polarizer (which is use to linearly polarize the laser output beam) when the laser itself emits a linearly polarized beam (as

can be seen in Fukushima et al. Fig. 1), since it has been held that omission of an element and its function in a combination where the remaining elements perform the same function as before involves only routine skill in the art. In re Karlson, 136 USPQ 184.

Regarding claim 46, Nagano all the stated limitations, except that the output beam would be use on an optical fiber; instead Nagano teaches an optical medium. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have chosen the optical medium of Nagano to be an optical fiber medium for the purpose of transmitting information/signal.

Regarding claims 39-45 and 47-55, Nagano and Applicant's admitted prior art teach all the stated limitations, as applied the claims 1-37 above.

Response to Arguments

11. Applicant's arguments with respect to claims 29-55 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cornelius H. Jackson whose telephone number is (571)272-1942. The examiner can normally be reached on 8:00 - 5:00, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (571)272-1941. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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